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Published

2011

Journal Title

Technical Reports of the Australian Museum, Online

DOI

https://doi.org/10.3853/j.1835-4211.23.2011.1576

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Technical Reports of the Australian Museum, Online (2011) No. 23: 165–174. ISSN 1835-4211
doi:10.3853/j.1835-4211.23.2011.1576

Changing Perspectives in Australian Archaeology, Part XI

Rare and Curious Thylacine Depictions from Wollemi National Park, New South Wales and Arnhem Land, Northern Territory

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ABSTRACT. Thylacines have long fascinated both Indigenous and non-Indigenous Australians. Ancient rock art depictions and recent attempts to clone thylacines with DNA from preserved specimens are good examples of this interest, with the Australian Museum involved in both the documentation of thylacine rock art and DNA sequencing. In this paper we report on a curious rock drawing from a site within Wollemi National Park, NSW and another rock art panel with superimposed paintings from Arnhem Land, NT. Both sites were found in recent years and documented as part of larger regional studies. Val Attenbrow has long argued that we should be cautious when interpreting archaeological evidence and assigning age, so with this in mind we offer a scientific assessment of these rare and unusual thylacine-like images. We conclude that images of thylacines were likely made over both a longer period of time and across a more geographically diverse area than previously realized.

TAÇON, PAUL S.C., WAYNE BRENNAN, AND RONALD LAMILAMI, 2011. Changing perspectives in Australian archaeology, part XI. Rare and curious thylacine depictions from Wollemi National Park, New South Wales and Arnhem Land, Northern Territory. *Technical Reports of the Australian Museum, Online* 23(11): 165–174.

In early 2001 an investigation was initiated into the rock art of the Greater Blue Mountains World Heritage Area, with a focus on Wollemi National Park. Wollemi had not been studied for rock art until then and little was known about its cultural heritage. However, the southern part of Wollemi National Park contains much Hawkesbury sandstone, ideal places for engraved platforms and adorned rock shelters. As Attenbrow (2002: 145–146) notes,

> [t]oday, the most numerous images that survive in the Sydney region are the striking engraved figures on rock platforms, and the drawings, paintings and stencils (pigment images) and a lesser number of engravings in rock shelters. These images are part of a regional style that stretches from the southern rim of the Hunter Valley in the north, to the Woronora Plateau in

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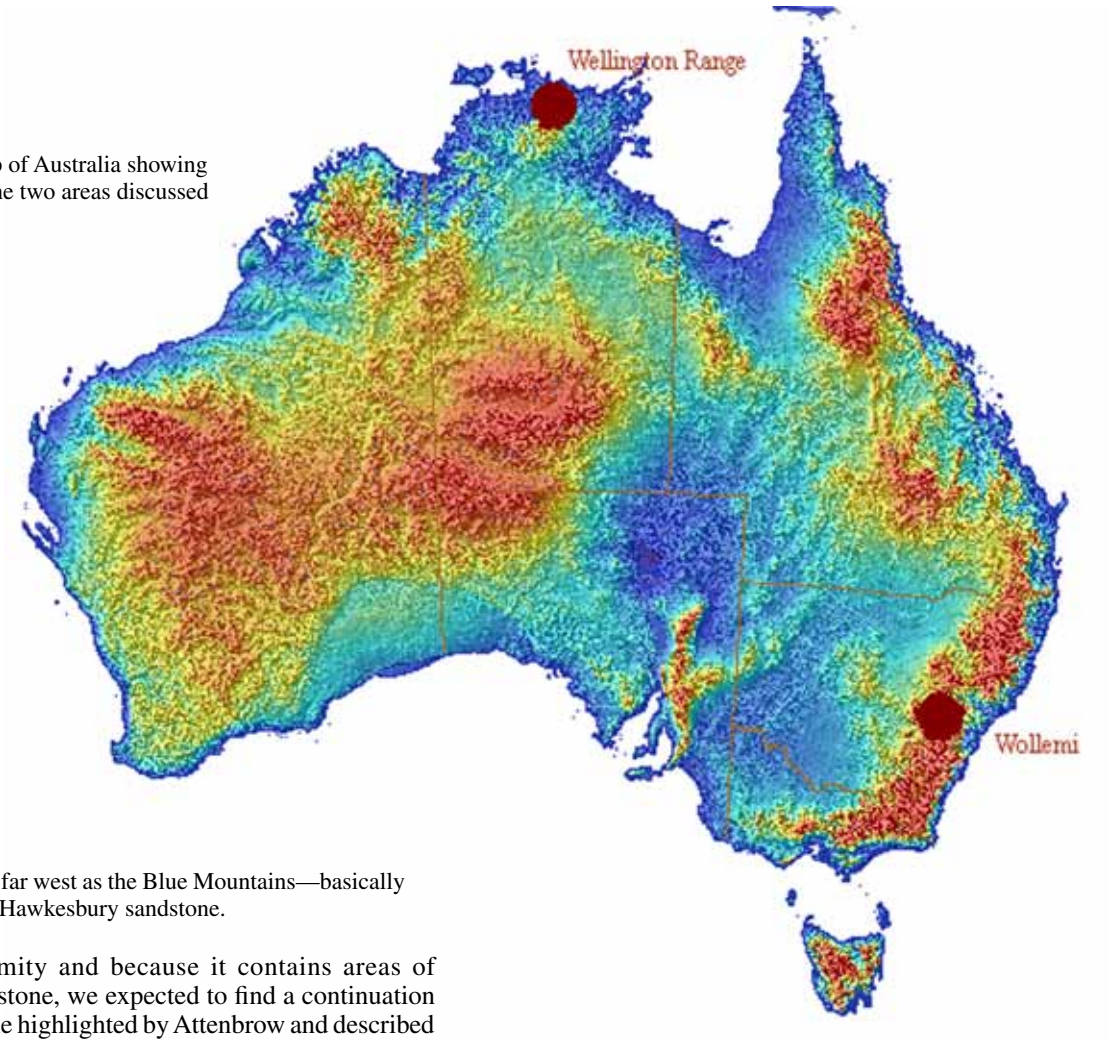

Figure 1. Map of Australia showing locations of the two areas discussed in the paper.

the south, and as far west as the Blue Mountains—basically the extent of the Hawkesbury sandstone.

Due to its proximity and because it contains areas of Hawkesbury sandstone, we expected to find a continuation of the regional style highlighted by Attenbrow and described by McDonald (2008) in Wollemi National Park.

This prediction was borne out, but we also found a varied mix of sites with influences not only from the east but also the west and northwest. A number of extraordinary sites, with numerous well-preserved images, unique subjects and rare techniques were found as well (Taçon *et al*., 2005, 2006, 2008, 2010, in press). At one location an unusual drawing of a striped dog-like animal that resembles a thylacine, or Tasmanian tiger (*Thylacinus cynocephalus*), was found.

In 2008, the Wollemi research project was incorporated into a national rock art project, *Picturing Change*, in collaboration with colleagues from various universities and Aboriginal communities (Saidin *et al*., 2008). Although this new project focuses on very recent rock art, made after contact with Asians and Europeans in various parts of Australia, research also involves recording older rock art associated with or at the same sites as that made during the contact period. In August 2008, while undertaking research in Arnhem Land for *Picturing Change*, a remarkable site was documented with two superimposed life-size thylacine-like animals, depicted in two of Arnhem Land's oldest styles—the Large Naturalistic and the Dynamic Figure manners of depiction (Chaloupka, 1993; Chippindale & Taçon, 1998). Only one other site with overlapping thylacine-like images has been published (Chaloupka, 1993: 96). Large Naturalistic paintings, the oldest surviving figurative depictions from western Arnhem Land, may have a late Pleistocene age (Chaloupka, 1993; Flood, 1997). Depictions of other thylacine-like paintings were also found, as well as a possible illustration of a Tasmanian devil (*Sarcophilus harrisii*) in a third, more recent, style.

In this paper we describe the striped animals from these two sites at opposite ends of the continent and try to assess whether they are actually depictions of *Thylacinus cynocephalus*. One has to be cautious when suggesting rock art depictions could be long-extinct creatures (Ouzman *et al*., 2002), but thylacines are different. Although they have become extinct, the species survived in Tasmania into the twentieth century and so we know exactly what they looked like, rather than supposing their living form by inference from skeletal fragments. Since there are no other marsupials of closely similar appearance, this is different from inferring a certain species of kangaroo being depicted rather than a closely similar one. Indeed, a review of the published literature suggests thylacine images are not uncommon in Australian rock art.

Thylacines and their depiction in rock art

The thylacine is a marsupial with dog-like appearance. It has "a long, narrow muzzle, short ears, and a long tail tapered from the hindquarters and generally carried lower than the animal's back" (Wright, 1972: 16). It has front and hind limbs of equal length, unlike macropods which have shorter front limbs. The head and body length range from 100–130 cm, while the tail is usually 50–65 cm (Rounsevell, 1991: 2). Measured from head to tail, some thylacines grew close to 2 m long. Vertical stripes on thylacine backs and sides, especially on the rear half of the body, is a diagnostic feature as these markings are unlike those of other marsupials, with the barred bandicoot and the numbat having fewer, less pronounced stripes arranged in a different pattern.

The thylacine is generally considered to have become

extinct in mainland Australia perhaps 3000 years ago (Archer, 1974), but not less than 2000 years ago (Rounsevell, 1991: 83). Dingos have been implicated in its demise, although the expansion of human populations, human hunting and differences in hunting capacity between dingos and thylacines, as well as climate change, probably all contributed (e.g., Johnson & Wroe, 2003; Wroe *et al*., 2007.) Chaloupka (1993: 96–98) illustrates and discusses rock paintings presumed to show Aboriginal people hunting thylacines. Corbett (2001: 17) suggests dingos colonized mainland Australia quickly and that the oldest reliably dated remains are about 3500 years (Mulvaney, 1960; Smith, 1982; Gollan, 1984). Thylacine fossils have been found from Western Australia through South Australia to Victoria and in Queensland. Thylacines have not only been the focus of much palaeontological debate but also feature in Australian rock art studies (e.g., Brandl, 1972; Wright, 1972; Lewis, 1977; Clegg, 1978; Mulvaney, 2009).

Researchers have identified thylacine depictions at rock art sites in northern and western Australia from their overall form and/or the distinctive stripes (Brandl, 1972; Wright, 1972; Lewis, 1977; Murray & Chaloupka, 1984). Mulvaney (2009: 46) has noted of thylacine depictions of the Pilbara region that "[t]hey belong to a naturalistic stylistic tradition that is true to life in form. The artist does not aim at photographic accuracy but emphasizes salient features", and that for engravings "the shape, angle and size of the panel suggests it influences relative anatomical proportions and angles perhaps as much as attempts at naturalistic reproduction. There also should be a consideration of the issue of artistic conventions that predicate the production of an image" (Mulvaney, 2009: 43). Mulvaney (2009) published 27 line drawings of thylacines depicted at Dampier Archipelago rock engraving sites. This work, along with studies by Wright (1972), illustrates that thylacines are not uncommon in Pilbara rock art, while Brandl (1972), Chaloupka (1993), Lewis (1977), Murray and Chaloupka (1984) and others have shown the same is true for western Arnhem Land. Walsh (2000: 396–398) has recorded a number of paintings presumed to be of thylacines from the Kimberley region of Western Australia.

The only depictions in southeastern Australia previously reported were recorded by Bursill (1993). He argues that two charcoal drawings in shelters of the greater Royal National Park area, south of Sydney, are thylacine-like. These are not as convincing as the depictions from northern Australia because they have fewer salient features. One may depict a dingo.

Most recently, Akerman and Willing (2009) have argued that a striped animal painted on the northwestern coast of the Kimberley is of a marsupial lion, *Thylacoleo carnifex*, rather than a thylacine, opening the possibility that other striped creatures from the Kimberley, Arnhem Land or other rock art sites may also represent this presumed long-extinct animal (also Chaloupka, 1993; Akerman, 1998; Walsh, 2000: 398–399). A possible second Kimberley *Thylacoleo* is depicted next to a human figure that appears to be fending it off with a barbed spear (Akerman, 2009).

Clegg (1978: 19–20) argues that (a) assuming ancient artists were depicting something real, (b) such depictions are similar to those of the same thing if it were depicted today and (c) species differences (distinguishing features) will be encoded into depictions, then "it can be stated that a picture is of that target object which it most closely resembles" (1978: 20). Clegg uses a mathematical formula, devised from contemporary pictures/drawings of various animals, to assess whether a particular depiction is likely to be of any given creature, in order to discriminate which could be of thylacines. In his publication there is not enough information to replicate his technique, so other rock art researchers have devised their own criteria.

The characteristics of thylacines in Australian rock art suggests at least six criteria should be evaluated:

- *a* Stripes (vertical, especially confined to back)
- *b* Overall shape (dog-like quadruped, long body)
- *c* Ear shape/size (short, rounded)
- *d* Head shape (long muzzle, rounded rather than pointed nose)
- *e* Tail (long, straight and tapered from hindquarters, sometimes with tuft at tip)
- *f* Length of forelimbs and hind limbs (should be the same).

If a particular depiction scores six out of six, it is probably a representation of a thylacine but, as Mulvaney (2009) warns, artistic conventions and other variables can influence how particular images look to us. In other words, many depictions might be of thylacines, even though only four or five of the six criteria are satisfied. In this regard Mulvaney (2009: 42) notes some rock art images are thylacine-like in every way except that they lack stripes. He suggests "[p]rior to the introduction of the dingo, it can be argued that the relative proportion of the four limbs, and not the colour banding, distinguished the thylacine from other marsupials" (Mulvaney, 2009: 42).

Recently discovered Wollemi striped animal picture

The Wollemi site with a drawing of a striped animal is located next to Pinchgut Creek, in the southern portion of Wollemi National Park. The site lies within what is today considered an area used in the past by various nearby Aboriginal groups, with Wiradjuri to the west and Darkinjung people to the east, and both accessing the area (Fig. 1). As Attenbrow (2002: 35) notes more generally for the greater Sydney region, "[a]ny boundaries mapped today for these languages or dialects can only be indicative at best. This is not only because of an apparent lack of detail about such boundaries in the historical documents, but because boundaries between language groups are not always precise lines." Boundaries likely also changed over time, and at nearby sites we have detected influences in the rock art from a number of different Aboriginal language groups (Taçon *et al*., 2008).

The Pinchgut site was discovered by bushwalkers in 2005 and documented by our team shortly thereafter. The long and narrow shelter is situated just above the creek. A prominent overhang protects a large wall, with 30 charcoal drawings (Fig. 2). The shelter, 22 m long by 4.1 m deep, reaches a maximum height of 3 m. Most of the identifiable drawings are of macropods, especially rock wallabies, but there are also two possible quolls and the striped quadruped. A number of the charcoal drawings, including the striped animal, were re-outlined in white sometime after initial execution. These probably date within the past few hundred years, since the white pigment (kaolinite/pipe clay) used across Australia usually degrades quickly.

The striped creature (Fig. 3) is 51 cm long by 21 cm high. Its head (Fig. 4) is 10 cm long by 4 cm wide, with ears 0.5 cm high, much smaller than those of the macropods. It has a dog-like appearance and an elongated body, very different

Figure 2. The Wollemi art panel with solid infill rock wallaby and quoll depictions, and a stripe-infill quadruped (lower right) with forelimbs and hind limbs of equal length. Photo: P. Taçon.

Figure 3. The stripe-infill animal in the Wollemi panel has very different body proportions to that of the presumed macropod and quoll depictions. Photo: P. Taçon.

from those of the quolls and macropods, all of which appear to be naturalistic and faithful renditions. Importantly, both the front and hind legs are the same length, 10 cm. The tail, straight and slightly raised, extends out 9 cm from the back. The length of the slightly curving back is 35 cm. The front half of the creature has solid charcoal infill, while the rear half has at least 16 stripes. The stripes appear to have been purposely positioned, commencing 12 cm behind the head and ending near the tail. A charcoal line above the lower outline defines the creature's belly and the stripes stop at this line. The animal is much more faded than the other drawings at the site and there are chemical salt accretions over some of the charcoal lines that define the animal. The tail, which is particularly faded, is only just discernible. In general, the striped creature has a much older appearance than the rest of the drawings and the rear leg of a solid charcoal macropod lies over part of the striped animal's tail. This reinforces the idea that the striped animal is one of the earliest depictions at the site.

Recently discovered Arnhem Land striped animal pictures

The Arnhem Land site lies in the Wellington Range, south of Goulbourn Island, within the traditional clan estate of Maung-speaking people of which Ronald Lamilami is the current senior traditional owner. Lamilami's father, Lazarus, recorded the traditional and changing lifestyle of his people (Lamilami, 1974), and today Ronald Lamilami is very concerned that his group's rock art sites be fully recorded and conserved for future generations. In the process of documenting Lamilami's most significant rock art site, Djuliiri (Taçon *et al.*, 2010), the site containing the panel with superimposed striped creatures was located a few hundred metres away.

The shelter consists of a small heavily eroded sandstone boulder sitting on a sandy, forested plain close to a large outlier and escarpment edge. The art panel (Fig. 5) is about 2.5 m above ground with a small sandstone floor area beneath. It is 4.7 m long and 1.8 m high. To the left is a second panel that is slightly smaller and has fewer paintings. A narrow overhang affords the paintings some protection from the elements; otherwise the panel is quite exposed. All the paintings have a weathered appearance. All are in varying shades of dark red, and all are representative of the region's earliest art styles. There are few recent painting styles or subjects at this location, although many sites nearby have such artwork. The two superimposed striped animals (Fig. 6) dominate the art panel and can be seen from tens of metres away.

The underlying figure has solid infill with dark stripes near its rear. Its form and solid dark infill is typical of the Large Naturalistic period, argued to be at least 13,000 years of age and possibly up to 15,000 BP (Chippindale & Taçon, 1998; Flood, 1997: 322–323). The head and body of the second striped creature are typical of animals depicted in the Dynamic Figure manner (Chaloupka, 1993), including body and head proportions, ear shape and the type of line infill. Dynamic Figures are believed to be older than 9,000 years of age (Lewis, 1988; Chaloupka, 1993).

The earlier, Large Naturalistic, striped creature (Fig. 7)

Figure 4. Close-up of the head of the Wollemi striped creature. Photo: P. Taçon.

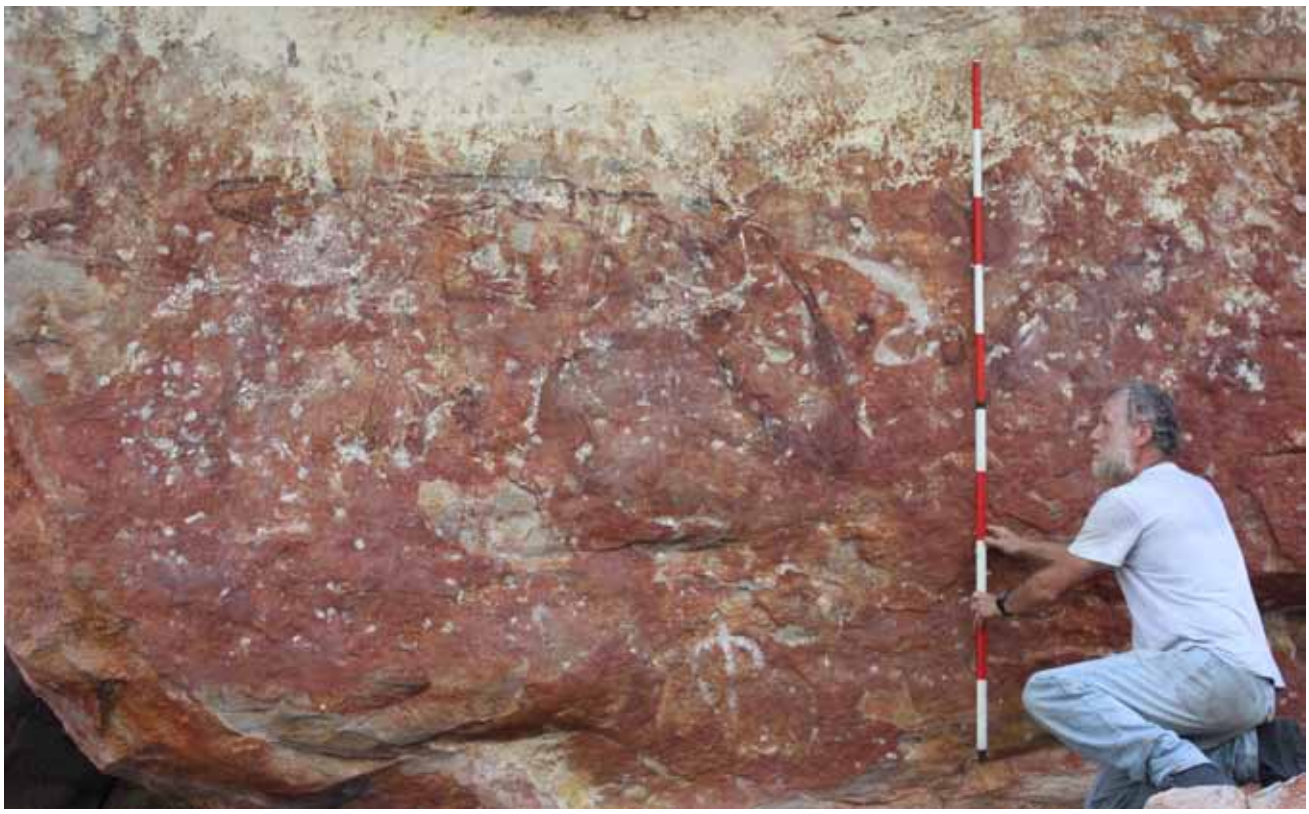

Figure 5. The Arnhem Land rock panel with overlapping thylacine-like creatures. Photo: M. Langley.

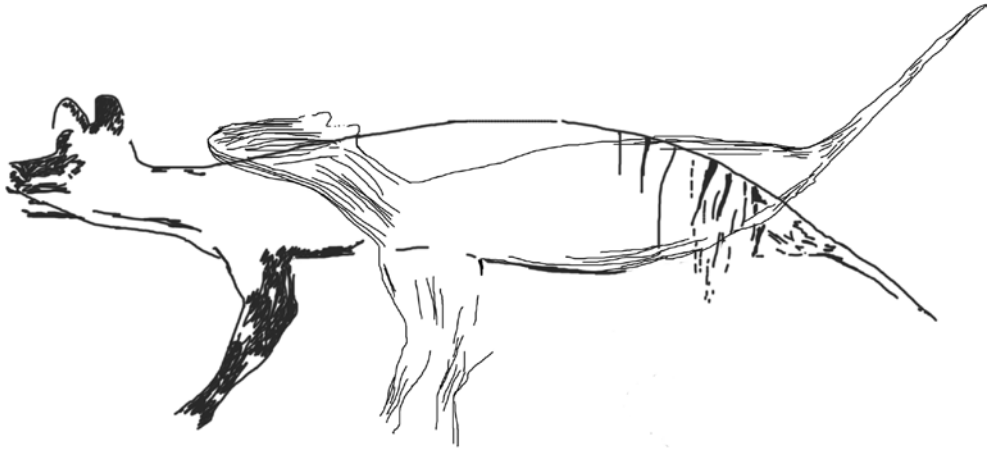

Figure 6. Drawing of the two superimposed Arnhem Land thylacines. Drawing by K. Mulvaney.

measures 2.25 m by 0.9 m, which is life-size or slightly larger than a thylacine. The later Dynamic striped animal (Fig. 8) is slightly smaller at 2.05 m by 0.8 m. However, its tail points upward, adding another 30 cm to the overall height of the image; the feet and back legs have eroded away, so the complete picture was once larger. Curiously, the head of the second creature is larger than that of the first: 36 cm long versus 26 cm (Fig. 9). In each painting the distance between the top of the back ear and the chin is 24 cm. The Large Naturalistic animal has a straight tail that measures 40 cm, but it may once have been longer as it ends at an eroded portion of the panel (Fig. 10). The Dynamic quadruped has an upward-pointing tail 64 cm in length. A solid and line infill purple-red snake is superimposed over part of each striped quadruped, over the legs of the Dynamic Figure style animal and the tail of the older Large Naturalistic figure. Other animals and geometric shapes are associated with the snake on other parts of the panel and on the adjacent one, including a small emu and a very large goanna. All of these are in a manner agreed to post-date Dynamic figures, so the layering at the panel is in agreement with that known from other sites (e.g., Chaloupka, 1993; Chippindale & Taçon, 1993).

Probable age and species depicted

The Wollemi striped animal has many thylacine features, including the right head shape, ear shape and size, tail shape and position, body proportions and dog-like appearance, limbs of equal length, stripes in the appropriate area of the body and not used as infill for the whole creature. It scores six out of six for the key criteria. Amongst other species known from southeast Australia that have/had stripes on their fur, the only other possibility is a barred bandicoot, but the Wollemi drawing does not have the pointy nose of a bandicoot, and lacks other key bandicoot features. Numbats have not been observed in this area of Australia since European contact. They once ranged from western New South Wales through to the west of Western Australia

Figure 7. Drawing of the Arnhem Land large Naturalistic thylacine. Drawing by K. Mulvaney.

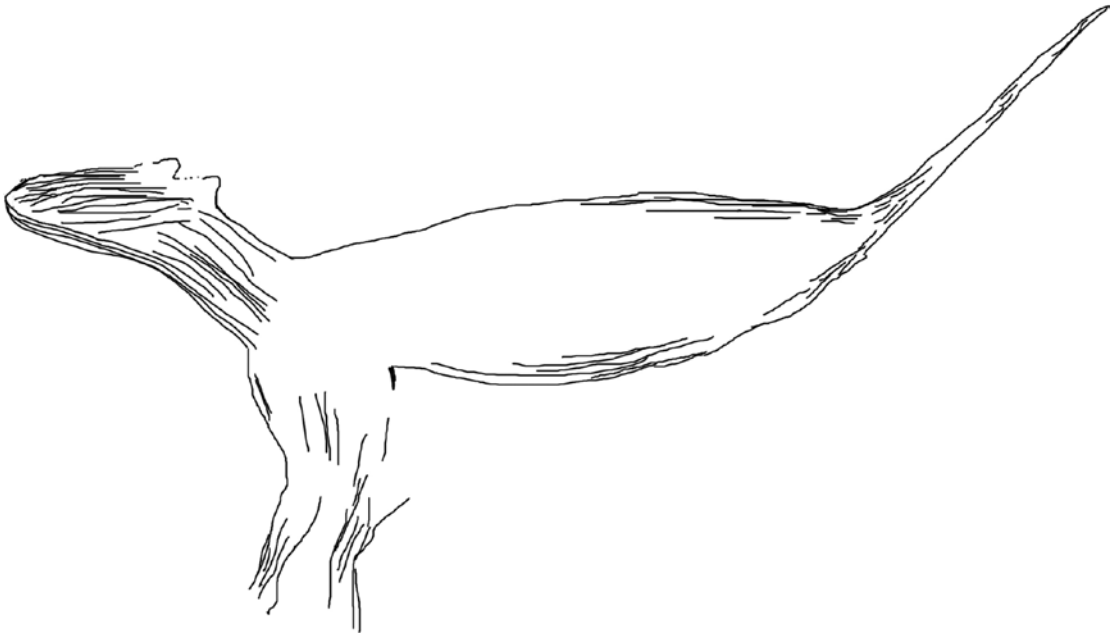

Figure 8. Drawing of the Arnhem Land Dynamic Figure thylacine. Stripes are not indicated in the drawing because the original artist incorporated the stripes of the Large Naturalistic thylacine into the Dynamic depiction. Drawing by K. Mulvaney.

(Friend & Kinnear, 1991: 84), but the drawing does not have numbat-like ears and other key numbat features such as an eye stripe. Nor does it have the body proportions of a Tasmanian devil. It also is very different from depictions of dingos at nearby sites, as the dingo drawings have curved tails, less elongated body proportions, larger and more pointed ears, among other things. A thylacine is the best fit for the Wollemi striped quadruped.

McDonald's (2008: 246–250) regional sequence for rock art of Mangrove Creek, the area east of the striped animal site, accords well with our own based on an analysis of 11 superimposed layers at the Eagle's Reach site (Taçon *et al.*, 2008). McDonald (2008: 249) argues that charcoal drawings were produced during Art Phase 3, from about 1600 years ago through to soon after European contact. More specifically, she suggests that Phase 3 began with plain dry black motifs (McDonald 2008: 247). If she is correct, the striped animal may be no more than 1600 years of age. This seems too recent for thylacines if they were indeed extinct by 3000 years ago, during McDonalds's Art Phase 2 (dominated by red paintings and hand stencils, and some white hand stencils). If the striped animal is older than 1600 BP, it suggests that either black charcoal drawings were made earlier than at Mangrove Creek and/or the thylacine persisted in the rugged and somewhat hostile environment of Wollemi National Park longer than elsewhere in other parts of mainland Australia.

The Arnhem Land thylacine-like quadrupeds are undoubtedly much older. Their species designation is more secure: not only do they score six out of six but also they resemble numerous other paintings already recognized to be depictions of thylacines by others such as Chaloupka (1993) and Lewis (1977). The more recent, in the Dynamic Figure manner of painting, is very similar to agreed depictions of thylacines in this style from other parts of western Arnhem Land (e.g., Brandl, 1982: 33–34, figs 69–71; Chaloupka, 1993: 96). The Large Naturalistic striped animal also resembles Arnhem Land depictions agreed to be of thylacines (e.g., Lewis, 1988: 130, plate 20), and has all the essential features—four limbs of equal length, stripes on back, dog-like head, small rounded ears, long straight tail and a long body. Dynamic Figure paintings are generally agreed to be older than 9000 years (Lewis, 1988; Chaloupka, 1993) and probably 10,000 years of age or more (Taçon & Brockwell, 1995; Flood, 1997: 322; Chippindale & Taçon, 1998: 107). This age estimate was arrived at on the basis of depicted fauna typical of a long vanished arid environment, analysis of environmental records, direct dating of more recent art and material culture depicted, such as hunting boomerangs believed to have not been used in Arnhem Land for thousands of years (e.g., Chaloupka, 1993: 122–123). Large Naturalistic paintings are thought to be up to 13,000 years old (Flood, 1997: 322–323), although some authors,

Figure 9. Close-up of the heads of the Arnhem Land stripe-infill animals. Photo: P. Taçon.

such as Chaloupka (1993), suggest they could be older. This is because they consistently lie underneath Dynamic Figures where superimpositions occur, and at excavated sites the amount of used ochre suddenly increases from levels dated 13,000 years ago onward (Jones, 1985; Flood, 1997: 322).

Conclusions

A comparative analysis of the three striped animal depictions has led us to a number of conclusions. First of all, by comparing attributes of the Wollemi charcoal drawing to those considered significant by Clegg (1978), Lewis (1977), Mulvaney (2009) and Wright (1972) for various creatures, and the six thylacine-specific criteria listed above, we note that the Wollemi drawing falls within the thylacine range more than that of any other creature. The Wollemi drawing does not look like a dingo, quoll, macropod, bandicoot, numbat, cat, Tasmanian devil or anything else that may have once lived in the area. It is the best candidate for a thylacine depiction in the rock art of southeast Australia.

The precise age of the drawing is not known. If McDonald (2008) is correct and charcoal drawings were not made in the area until about 1600 years ago, then it suggests either that thylacines persisted in Wollemi longer than elsewhere in Australia, or that charcoal drawings were made earlier than McDonald found for the nearby Mangrove Creek area, and/or that the ancient Aboriginal artist depicted something unknown that today we wrongly interpret as a thylacine. That seems unlikely, given that all other animal depictions in Wollemi National Park are naturalistic and have many species-specific characteristics (e.g., Taçon *et al*., 2010). Perhaps thylacines survived in rugged pockets of what is now the Greater Blue Mountains World Heritage Area later than elsewhere in mainland Australia.

Secondly, the Arnhem Land paintings are definitely depictions of thylacines. They also are very close to the actual life size of large specimens. The more recent, in the Dynamic Figure manner, is likely to be at least 9000–10,000 years of age. There are many other Dynamic Figure depictions of thylacines but, being life-size, it is much larger than most. Only one larger Dynamic thylacine has been reported. It measures 2.5 m in length (Chaloupka, 1993: 98), and there is another at 2 m long (Chaloupka, 1984: 108). Only one other site has a Large Naturalistic thylacine underneath a Dynamic thylacine: there they are not life size and only part of the Dynamic thylacine remains (Chaloupka, 1993: 96). The older Wellington Range painting, stratified under the Dynamic thylacine, is potentially 13,000 or more years of age (Flood, 1997: 322–323). It is one of the older surviving depictions of a thylacine from Arnhem Land and from the whole Top End of the Northern Territory.

Finally, this study illustrates that rigorous methods should be adhered to in order to determine what a rock art image likely depicts and that, following Macintosh (1977) and others, we should always be cautious when interpreting rock art. Furthermore, as Attenbrow (2002: 148) notes “images that appear to be animals, if produced in a context where the lore was being passed on to younger generations, may represent totemic beings.” In this regard the thylacine and its depictions may once have been integral to aspects of the Dreaming, kinship networks and totemic landscapes of particular Aboriginal groups (Mulvaney, 2009: 47). We will never know the full extent of the meaning thylacines had within past Aboriginal societies, but we can conclude that in many parts of Australia, it once was important to depict them more or less naturalistically in prominent rocky places so that some meaning, whether secular or sacred, would persist across generations.

Figure 10. Close-up of the tails of the Arnhem Land stripe-infill animals. Photo: P. Taçon.

ACKNOWLEDGMENTS. The title of this paper was partly inspired by the title of a book about the history of the Australian Museum (Strahan, 1979), where Val Attenbrow has spent much of her archaeological career. Research for the paper was supported by Australian Research Council Discovery Grant DP0877463, and is part of the *Picturing Change* research program. It has also been supported by Hardie Holdings, a National Geographic Research and Exploration grant, the Greater Blue Mountains World Heritage Institute, and Griffith University. The Greater Blue Mountains and the Waminari Aboriginal communities are thanked for general support, field assistance and hospitality. The NSW Department of Environment and Climate Change and the Northern Land Council are thanked for permits and advice. Daryl Guse (Australian National University) is thanked for supporting this research in the Wellington Range in conjunction with his own project. We also thank Sally K. May, Matthew Kelleher, Graham King, Michael Jackson, Neil Stone, James Woodford and others who assisted in and out of the field. Photographs are by Paul S.C. Taçon and Michelle Langley. Not so anonymous referees Christopher Chippindale and Ken Mulvaney are thanked for comments that much improved this paper. Ken Mulvaney is also thanked for providing the drawings for Figures 6–8.

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